## **Recovery Plan Action Status**

Plan Name: Recovery Plan for Serpentine Soil Species of the San Francisco Bay Area

Plan Status: Final Plan Date: 30-Sep-98 Lead Agency: USFWS

Lead Office: Sacramento Fish And Wildlife Office 414-6600)

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Bay checkerspot butterfly (Euphydryas editha bayensis), Tiburon mariposa lily (Calochortus iiburonensis), Metcalf Canyon ewelflower (Streptanthus albidus ssp. albidus), Pennell's bird's-beak (Cordylanthus elenuis ssp. capillaris), San Mateo woolly sunflower (Eriophyllum atilobum), Coyote ceanothus (Ceanothus (Ceanothus (Ceanothus ierrisae), White-rayed pentachaeta (Pentachaeta bellidiflora), Presidio clarkia (Cirsium fontinale var. fontinale), Tiburon paintbrush (Castilleja affinis ssp. neglecta), Marin dwarf-flax (Hesperolinon congestum), Tiburon jewelflower (Streptanthus niger), San Mateo thornmint (Acanthomintha obovata ssp. dudtonii), Santa Clara Valley dudleya (Dudleya (Dudleya (Dudleya (Dudleya (Dudleya (Dudleya (Streptanthus dudleya (Dudleya (Dudleya (Streptanthus dudleya (Dudleya (Dudleya (Dudleya (Streptanthus dudleya (Dudleya (Dudleya (Streptanthus dudleya (S	2	1.1	Establish cooperative programs with participants from the public and private sector	Ongoing Not Current	FY 1995 - FY 1999		U.S. Fish and Wildlife Service, California Department of Fish and Game	Other: Information and Education	Internal Technical Assistance	Cooperative program established with Stuart Weiss and San Mateo Parks for reintroduction of Bay Checkerspot into Edgewood Park.

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Bay checkerspot butterfly	2	1.2.1	Develop and implement outreach	Not Started			U.S. Fish and Wildlife Service	Other: Information and Education	Internal Technical Assistance	
(Euphydryas editha			plans				Wildille Service	and Education	Assistance	
bayensis), Tiburon			piaris							
mariposa lily										
(Calochortus										
tiburonensis), Metcalf Canyon										
ivietcair Canyon										
jewelflower										
(Streptanthus										
albidus ssp.										
albidus), Pennell's										
bird's-beak										
(Cordylanthus										
tenuis ssp.										
capillaris), San										
Mateo woolly										
sunflower										
(Eriophyllum										
latilobum), Coyote										
ceanothus										
(Ceanothus										
ferrisae), White-										
rayed pentachaeta										
(Pentachaeta										
bellidiflora),										
Presidio clarkia										
(Clarkia										
franciscana),										
Fountain thistle										
(Cirsium fontinale										
var. fontinale),										
Tiburon paintbrush										
(Castilleja affinis										
ssp. neglecta),										
Marin dwarf-flax										
(Hesperolinon										
congestum),										
Tiburon jewelflower										
(Streptanthus										
niger), San Mateo										
thornmint										
(Acanthomintha										
obovata ssp.										
duttonii), Santa										
Clara Valley										
dudleya (Dudleya										
setchellii)		1						1	1	

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(Acanthomintha obovata ssp. duttonii), Santa Clara Valley dudleya (Dudleya setchellii)										

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Metcalf Canyon jewelflower (Streptanthus albidus ssp. albidus), Coyote ceanothus (Ceanothus ferrisae)		2.1.16	Secure and protect serpentine habitat in Anderson Reservoir area/county park area (Santa Clara County) for multiple species	Not Started			City of San Jose, California, Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Acquisition: Easement	Internal Field Assistance	Precise extent and location need clarification.

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Bay checkerspot butterfly (Euphydryas editha bayensis), Tiburon mariposa lily (Calochortus tiburonensis), Pennell's bird's-beak (Cordylanthus tenuis ssp. capillaris), Coyote ceanothus (Ceanothus ferrisae), Presidio clarkia (Clarkia franciscana), Fountain thistle (Cirsium fontinale var. fontinale), Tiburon paintbrush (Castilleja affinis ssp. neglecta), Santa Clara Valley dudleya (Dudleya setchellii)	2	2.2.28	Secure and protect serpentine habitat Northwest of Healdsburg (Sonoma County) for Arctosaphylos bakeri ssp. Bakeri	Not Started			Sonoma County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Acquisition: Easement	Internal Field Assistance	

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Bay checkerspot	1	3.1	Develop and	Ongoing Current	FY 1995 - FY 1999		California	Management:	Internal Field	Staff from
butterfly			implement				Department of	General	Assistance	Creekside Center
(Euphydryas editha			appropriate				Parks and			for Earth Observation
bayensis), Tiburon			management				Recreation,			
mariposa lily			actions at multiple				California			working with Santa
(Calochortus			sites, for multiple				Department of			Clara Open Space
tiburonensis),			species				Transportation, City			Authority to
Metcalf Canyon			'				of San Jose,			develop new
jewelflower							California, City of			monitoring protocol
(Streptanthus							Tiburon, California,			for Dudleya
albidus ssp.							East Bay Regional			setchellii.
albidus), Pennell's							Park District, Marin			
bird's-beak							County Open			Invasive plants are
(Cordylanthus							Space District,			being removed
tenuis ssp.							Marin Municipal			from Cirsium
capillaris), San							Water District,			fontinale var.
Mateo woolly							Midpeninsula			fontinale
sunflower							Regional Open			populations at
(Eriophyllum							Space District,			Stulsaft Park and
latilobum), Coyote							Rancho Santa Ana			CalTrans property
							Botanic Garden,			near Woodside
ceanothus (Ceanothus							San Francisco			Glens.
										Gieris.
ferrisae), White-							Water Department,			
rayed pentachaeta							Tiburon Landmark			
(Pentachaeta							Society, University			
bellidiflora),							of California at			
Presidio clarkia							Berkeley, San			
(Clarkia							Mateo County,			
franciscana),							California,			
Fountain thistle							Stanislaus County,			
(Cirsium fontinale							California, Marin			
var. fontinale),							County, California,			
Tiburon paintbrush							San Francisco			
(Castilleja affinis							County, California,			
ssp. neglecta),							Santa Clara			
Marin dwarf-flax							County, California,			
(Hesperolinon							Contra Costa			
congestum),							County, California,			
Tiburon jewelflower							Alameda County,			
(Streptanthus							California, Sonoma			
niger), San Mateo							County, California,			
thornmint							National Park			
(Acanthomintha							Service, U.S. Fish			
obovata ssp.							and Wildlife			
duttonii), Santa							Service, California			
Clara Valley							Department of Fish			
dudleya (Dudleya					1		and Game, Private			
setchellii)					1		landowners			

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Coyote ceanothus (Ceanothus ferrisae)	1	4.2.30	Survey historic and potential habitat at Anderson Reservoir / Coyote Reservoir area (Santa Clara County) for multiple species	Ongoing Current			Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Population Surveys	Graduate Student	Occurrences around Anderson Dam were surveyed. Approximately 60,000 to 100,000 plants are likely present in these 3 occurrences.

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Metcalf Canyon jewelflower (Streptanthus albidus sp. albidus), Coyote ceanothus (Ceanothus (Crastilleja affinis sp. neglecta), Santa Clara Valley dudleya (Dudleya setchellii)	1	4.2.33	Survey historic and potential habitat at Coyote Ridge area (Santa Clara county) for multiple species	Partially Complete	FY 2005		Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game, Private landowners	Research: Population Surveys	Graduate Student	2005-Transition Zone between S. Albidus and Albidus and S. Albidus peramoenus mapped. 2005-2006- Comprehensive mapping of Dudleya on selected mitigation parcels (100oc) completed-more mapping planned elsewhere. 2006-C. Affinis neglecta pops mapped in detail. 135 plants at southern pop, about 1000 plants in northern canyon on 0.25 ac.  Annual survey of Bay Area Checkerspot Butterfly. Conducted at UTC, Kirby Canyon, and Young Ranch.
Coyote ceanothus (Ceanothus ferrisae)	2	4.2.34	Conduct surveys in historic and potential habitat in Croy Canyon area (Santa Clara county) for Ceanothus ferrisae	Not Started			U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Population Surveys	Graduate Student	
Coyote ceanothus (Ceanothus ferrisae), Tiburon paintbrush (Castilleja affinis ssp. neglecta), Santa Clara Valley dudleya (Dudleya setchellii)	2	4.2.38	Conduct surveys in historic and potential habitat North of Llagas Avenue (Santa Clara County) for multiple species	Not Started			Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Population Surveys	Graduate Student	

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Bay checkerspot butterfly (Euphydryas editha bayensis), Metcalf Canyon jewelflower (Streptanthus albidus ssp. albidus), Coyote ceanothus (Ceanothus ferrisae), Fountain thistle (Cirsium fontinale var. fontinale), Tiburon paintbrush (Castilleja affinis ssp. neglecta), Santa Clara Valley dudleya (Dudleya setchellii)	1	5.25	Conduct surveys in historic and potential habitat near Niles (alameda County) for Streptanthus albidus peramoenus	Not Started			U.S. Fish and Wildlife Service	Research: Habitat Status	Graduate Student	

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Coyote ceanothus (Ceanothus ferrisae)	2	5.28	Conduct necessary research at Anderson Reservoir / County Park area (Santa Clara County) for multiple species	Not Started			Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Habitat Requirements	Graduate Student	Research includes fire ecology of Ceanothus ferrisiae
Coyote ceanothus (Ceanothus ferrisae), Santa Clara Valley dudleya (Dudleya setchellii)	3	5.31	Conduct necessary research North of Llagas Avenue (Santa Clara County) for multiple species	Not Started			Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Management Techniques	Graduate Student	Research includes fire ecology of Ceanothus ferrisiae

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Coyote ceanothus (Ceanothus ferrisae)	3	6.1.3	Store viable seeds for the following plant taxa: Arctostaphylos bakeri bakeri Castilleja affinis neglecta Dudleya setchellii Hesperolinon congestum Streptanthus albidus	Not Started			Rancho Santa Ana Botanic Garden, University of California at Berkeley, San Mateo County, California, Stanislaus County, California, Marin County, California, San Francisco County, California, Santa Clara County, California, Contra Costa County, California, Alameda County, California, Sonoma County, California, National Park Service, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Habitat Requirements	Graduate Student	Seed collection was conducted in 2010.